CENTRAL COAST BEEKEEPERS NEWSLETTER

September, 2026

Join us on Thursday, September 17th at the Newport Extension office from 1:30 to 3:30pm to hear a presentation by Dr. Andony Melathopoulos:

T*he Pollen Thieves: The secret war between plants and bees*

> ***Description: While the bond between bees and flowers is often celebrated as a harmonious partnership, it is actually a tenuous, evolutionary arms race. This talk dives into the hidden mechanics of flower visits, revealing how plants***

***deploy attractants, toxins, and complex release mechanisms to manipulate bees. By reframing this seeming cooperation as a special case of herbivory, we will explore the surprising ways both sides fight for the upper hand. Finally, you will learn practical pollen-trapping techniques to decode the forage coming into your hives and identify exactly which plants your bees are outsmarting--*an under looked component for beekeepers and the management of their colonies.**

Additionally, summers and falls in western Oregon are noted for their rough conditions when it comes to honey bee forage that provides their nutritional needs. This presentation will discuss the basics of honey bee nutrition, how nutrition impacts the health of both individual bees and the colony, and how beekeepers are affected by this. The talk will also discuss ways beekeepers can manage their apiaries to mitigate these risks, and look over the local forager available at this time of year.

Andony is the Associate Professor for Pollinator Health through the Extension Service at OSU and

the driving force for our beautiful Pollinator license Plate here in Oregon

We look forward to seeing everyone at the meeting!

Tropilaelaps Mites: New Insights into a Growing Threat

A recent interception: Evidence of arrival risk

A recent interception aboard a vessel headed to a US port is a vivid reminder of the risk of its arrival and establishment. In 2025, inspectors examined a swarm of giant honey bees (*Apis dorsata dorsata*) carrying *Tropilaelaps mercedesae* mites on a vessel bound for the Port of Elizabeth, New Jersey. Genetic analysis traced the swarm to a southern India lineage, and route reconstruction suggests that the bees survived at sea for a long time. The intercepted bees also tested positive for black queen cell virus, deformed wing virus B, and American foulbrood, underscoring that swarms can move pathogens as well as mites. The swarm was destroyed at sea, but the case makes the point that coordinated port and shipboard surveillance is essential to catching swarms and pests (Ramirez et al., 2026).

Distribution: Where *Tropilaelaps* mites are found today

Believed to have originated on the giant honey bee in South and Southeast Asia, *T. mercedesae* jumped to the Western honey bee (*Apis mellifera*) after *A. mellifera* was introduced to Asia, with the first record dating to 1963. A recent review restricted to molecularly or morphologically confirmed records found the mite established in *A. mellifera* colonies in 13 countries, including recent detections in Georgia, the Krasnodar region of Russia, Uzbekistan, and South Korea (Tokach et al., 2026a). The detection of *Tropilaelaps* outside the natural range of *A. dorsata* suggests that the mite no longer needs its original host to persist, and this westward expansion of *Tropilaelaps* has economic consequences. For example, Canada has suspended honey bee package and queen imports from Ukraine due to reports of the mite in nearby countries.

Biology and dispersal: How the mite spreads

New research is filling gaps in *Tropilaelaps* biology. Two studies clarify how the mite spreads between colonies. Researchers confirmed the transmission of *Tropilaelaps* mites by foragers. Using funnel traps in Thailand, Tokach et al. (2025) recovered *T. mercedesae* from adult bees exiting their hives, but only from colonies with elevated brood infestation. Of the mites examined for sex, all were female, consistent with the idea that mated females are the mites most likely to found new infestations by drifting between colonies. Separately, a Georgia field study found that a natural swarm can carry reproductive mites to new locations: eight female mites left with a swarm, four survived long enough to enter the swarm's first sealed brood, and two went on to reproduce. These results confirmed swarm-mediated transmission as a plausible mechanism for longer-range spread into newly invaded regions (Uzunov et al., 2026).

Surveillance and detection: Which methods work best

Detection matters most before an infestation becomes established, and a comparative review of available monitoring methods confirmed that the tools beekeepers already use for *Varroa* are not all effective for

Tropilaelaps, particularly at low infestation rates (Tokach et al., 2026b). The adult bee-based alcohol wash and powdered sugar shake methods are not very sensitive for *Tropilaelaps* mite detection. However, the bottom-board sticky traps (when evaluated by trained individuals), as well as the worker brood cell uncapping and the brood frame bump test are more sensitive methods. Brood-based methods have higher sensitivity than evaluating mites on adult bees because *Tropilaelaps* mites spend much of their time inside brood cells when they infest honey bee colonies. Two faster approaches include the light bump method following brood frame uncapping described as a modification of the original bump method (Pettis et al., 2013), and the observation or recording of *Tropilaelaps* mites emerging after de-capping sealed brood cells using off-the-shelf waxing strips (Uzunov *et al.*, 2025). A video demonstrating the Rapid brood decapping for Tropilaelaps mercedesae detection was posted by Uzunov et al. in 2024. A subsequent field trial in Papua New Guinea put different methods to the test and found that environmental DNA (eDNA) swabs and acaricide-treated sticky mats had the highest sensitivity, the waxing-strip brood uncapping method landed in the middle, and the alcohol wash was less sensitive (Schouten et al., 2026).

Treatment: Which Varroa control tools are effective

Several go-to *Varroa* treatments aren't as effective against *Tropilaelaps*. This is largely because these mites spend nearly their entire life cycle sealed inside brood cells, unlike *Varroa*, which has a prolonged phoretic phase on adult bees. Oxalic acid and the original amitraz formulations do not penetrate wax cappings, so they have little effect on *Tropilaelaps* sealed inside brood. New formulations have shown promising results, however. In addition, formic acid shows efficacy because its vapor penetrates capped cells and reaches mites that other treatments cannot touch.

A study in Georgia showed that two formic acid formulations (Formic Pro® and Muraviinka®) drove *T. mercedesae* to near-complete mortality within 2.5–5 days regardless of season, while *V. destructor* mortality was incomplete and strongly season-dependent. Those same Georgia colonies, however, showed substantial *Tropilaelaps* reinfestation in less than a month, a reminder that a single effective treatment is not the same as long-term control (Janashia et al., 2026). A separate Thailand trial comparing formic acid to thermal remediation (heating pads) found formic acid reduced both Varroa and *Tropilaelaps* species to near-zero within days and held them there for the full three-week study, with residual mite-killing effects detected up to 14 days after application. Heat treatment worked more slowly and less completely, and mite populations in the heat-treated colonies rebounded quickly with no residual killing effect once treatment stopped (Sankovitz et al., 2025). Together, these trials suggest that formic acid is currently a reliable option against *Tropilaelaps*, but that treatments need to be repeated to prevent rebound. Natural or managed brood breaks can also be part of an integrated pest management strategy for *Tropilaelaps*.

References

- Janashia *et al.* (2026). Timing matters: Seasonal variations in the efficacy of formic acid treatments against the honey bee parasites *Tropilaelapsmercedesae* and Varroa destructor in the Caucasus. Veterinary Parasitology, 345:110771. https://doi.org/10.1016/j.vetpar.2026.110771
- Pettis *et al*. (2013). A rapid survey technique for *Tropilaelaps* mite (Mesostigmata: Laelapidae) detection. J Econ Entomol. 106(4):1535-44. https://doi.org/10.1603/EC12339
- Ramirez et al. (2026). Interception of an Apis dorsata swarm with Tropilaelaps mercedesae and Kuzinia morsei mites on a cargo vessel inbound to the United States. Frontiers in Insect Science, 6:1829350. https://doi.org/10.3389/finsc.2026.1829350

- Sankovitz *et al.* (2025). Evaluation of efficacy of formic acid and thermal remediation for management of *Tropilaelaps* and Varroa mites in central Thailand. Journal of Apicultural Research, 64(4), 1049–1058. https://doi.org/10.1080/00218839.2025.2495393
- Tokach *et al.* (2025). Observation of *Tropilaelapsmercedesae* (Mesostigmata: Laelapidae) on Western honey bees (Apis mellifera) exiting colonies. Journal of Economic Entomology, 118(2), 966–969. https://doi.org/10.1093/jee/toae305
- Tokach *et al.* (2026a). Global range of *Tropilaelapsmercedesae*. Journal of Apicultural Research, 1–5. https://doi.org/10.1080/00218839.2026.2645867
- Tokach *et al.* (2026b). Sensitivity of current *Tropilaelapsmercedesae* monitoring methods in Apis mellifera colonies. Scientific Reports, 16:16778. https://doi.org/10.1038/s41598-026-46467-0
- Schouten *et al.* (2026). Evaluation of methods for early detection of *Tropilaelaps* mites in European honey bee (Apis mellifera) colonies. Scientific Reports, 16:22309. https://doi.org/10.1038/s41598-026-52776-1
- Uzunov *et al.* (2025). Rapid Brood Decapping for *Tropilaelapsmercedesae* Detection. Bee World, 102(1), 15–20. https://doi.org/10.1080/0005772X.2025.2483730
- Uzunov *et al.* (2026). Swarming promotes *Tropilaelapsmercedesae* (Mesostigmata: Laelapidae) dispersal in Apis mellifera (Hymenoptera: Apidae). Journal of Economic Entomology, 119(2), 1473–1477. https://doi.org/10.1093/jee/toag027